

AMENDMENTS TO THE CLAIMS

1. **(previously presented)** A substrate processing apparatus, comprising:

a substrate transfer section;

a plurality of modules, each of said plurality of modules being directly detachably attached to said substrate transfer section; and

a common first substrate transfer device, provided in said substrate transfer section, for transferring substrates into said plurality of modules,

wherein said plurality of modules are piled up adjacent to, but spaced separately from one another in a substantially vertical direction such that said plurality of modules are capable of being attached to and detached from a wall of said substrate transfer section independent of one another,

wherein each of said plurality of modules comprises:

a substrate processing chamber, having a hermetic structure, for processing said substrates;

an intermediate chamber having a hermetic structure and provided between said substrate processing chamber and said substrate transfer section;

a first valve provided between said substrate processing chamber and said intermediate chamber, said first valve capable of establishing hermetic isolation between said substrate processing chamber and said intermediate chamber when closed, and capable of allowing said substrates to pass therethrough when opened; and

a second valve provided between said intermediate chamber and said substrate transfer section, said second valve capable of establishing hermetic isolation

between said intermediate chamber and said substrate transfer section when closed, and capable of allowing said substrates to pass therethrough when opened, and

wherein said intermediate chamber is provided with a second substrate transfer device for transferring said substrates to and from said substrate processing chamber.

2. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein, in each of said plurality of modules:

said substrate processing chamber has a hermetic structure of vacuum level for processing said substrates;

said intermediate chamber has a hermetic structure of vacuum level;

said first valve is capable of establishing hermetic isolation of vacuum level between said substrate processing chamber and said intermediate chamber when closed, and is capable of allowing said substrates to pass therethrough when opened; and

said second valve is capable of establishing hermetic isolation of vacuum level between said intermediate chamber and said substrate transfer section when closed, and is capable of allowing said substrates to pass therethrough when opened.

3. **(original)** A substrate processing apparatus as recited in claim 2, wherein said substrate processing chamber and said intermediate chamber can be independently reduced in pressure.

4. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein said intermediate chamber is further provided with a substrate holding device capable of holding said substrates, said substrate holding device being positioned closer to said substrate transfer section than said second substrate transfer device.

5. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein said substrate transfer section transfers said substrates under atmospheric pressure.

6. **(previously presented)** A substrate processing apparatus as recited in claim 5, wherein said substrates are processed under a reduced pressure in said substrate processing chamber.

7. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein said substrate transfer section is further provided with a cassette holding device for holding a cassette capable of accommodating a plurality of said substrates, said first substrate transfer device being capable of transferring said substrates between said cassette and said plurality of modules.

8. **(previously presented)** A substrate processing apparatus as recited in claim 7, wherein said first substrate transfer device is provided with a structure capable of transferring said cassette.

9. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein said substrate transfer section is further provided with an elevator capable of vertically moving said first substrate transfer device.

10. **(previously presented)** A substrate processing apparatus as recited in claim 9, wherein said substrate transfer section is further provided with a cassette introducing section for transferring said cassette into said substrate transfer section and carrying out said cassette from said substrate transfer section, said cassette introducing section being disposed at a predetermined height which is different from the height of said cassette holding device.

11. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein said substrate processing apparatus is capable of processing a plurality of said substrates simultaneously, and said second substrate transfer device is capable of transferring simultaneously the same number of substrates as said plurality of substrates to be simultaneously processed by said substrate processing apparatus.

12. **(currently amended)** A substrate processing apparatus as recited in claim 11,

wherein said substrate processing apparatus is a plasma enhanced processing apparatus for processing said substrates utilizing plasma, and includes a

second substrate holding device capable of holding said plurality of substrates with the substrates being laterally arranged side by side, and

wherein said second substrate transfer device is capable of transferring simultaneously said plurality of substrates laterally arranged side by side.

13. **(original)** A substrate processing apparatus as recited in claim 1, wherein said substrate processing apparatus is capable of processing a plurality of said substrates simultaneously, and said second substrate transfer means is capable of transferring said plurality of substrates one by one to respective their processing positions where said plurality of substrates are to be simultaneously processed.

14. **(previously presented)** A substrate processing apparatus, comprising:
a substrate transfer section;
a plurality of modules, each of said plurality of modules being directly detachably mounted to said substrate transfer section; and
a common first substrate transfer device, provided in said substrate transfer section, for transferring substrates into said plurality of modules,
wherein said plurality of modules are piled up adjacent to, but spaced separately from one another in a substantially vertical direction such that said plurality of modules are capable of being attached to and detached from said substrate transfer section independent of one another,

wherein said plurality of modules are piled up adjacent to, but spaced separately from one another in a substantially vertical direction such that said plurality of modules are capable of being attached to and detached from a wall of said substrate transfer section independent of one another,

wherein each of said plurality of modules comprises:

a substrate processing chamber, having a hermetic structure, for processing said substrates;

first and second intermediate chambers provided between said substrate processing chamber and said substrate transfer section, each having a hermetic structure, said first intermediate chamber being located closer to said substrate processing chamber than said second intermediate chamber, and said second intermediate chamber being located closer to said substrate transfer section than said first intermediate chamber;

a first valve provided between said substrate processing chamber and said first intermediate chamber, said first valve capable of establishing hermetic isolation between said substrate processing chamber and said first intermediate chamber when closed, and capable of allowing said substrates to pass therethrough when opened;

a second valve provided between said first intermediate chamber and said second intermediate chamber, said second valve capable of establishing hermetic isolation between said first intermediate chamber and said second intermediate chamber when closed, and capable of allowing said substrate or said substrates to pass therethrough when opened; and

a third valve provided between said second intermediate chamber and said substrate transfer section, said third valve capable of establishing hermetic isolation between said second intermediate chamber and said substrate transfer section when closed, and capable of allowing said substrates to pass therethrough when opened,

wherein said second intermediate chamber is provided with a substrate holding device capable of holding said substrates, and

wherein said first intermediate chamber is provided with a second substrate transfer device capable of transferring said substrates between said substrate holding device and said substrate processing chamber.

15. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein, in each of said plurality of modules:

said substrate processing chamber has a hermetic structure of vacuum level for processing said substrates;

said first and second intermediate chambers each have a hermetic structure of vacuum level;

said first valve is capable of establishing hermetic isolation of vacuum level between said substrate processing chamber and said first intermediate chamber when closed, and is capable of allowing said substrates to pass therethrough when opened;

said second valve is capable of establishing hermetic isolation of vacuum level between said first intermediate chamber and said second intermediate chamber when closed, and is capable of allowing said substrates to pass therethrough when opened; and

said third valve is capable of establishing hermetic isolation of vacuum level between said second intermediate chamber and said substrate transfer section when closed, and is capable of allowing said substrates to pass therethrough when opened.

16. **(original)** A substrate processing apparatus as recited in claim 15, wherein said substrate processing chamber, said first intermediate chamber and said second intermediate chamber can be independently reduced in pressure.

17. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein said substrate transfer section transfers said substrates under atmospheric pressure.

18. **(previously presented)** A substrate processing apparatus as recited in claim 17, wherein said substrates are processed under a reduced pressure in said substrate processing section.

19. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein said substrate holding device is a heat-resistant substrate holding device.

20. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein said substrate transfer section is further provided with a cassette holding device for holding a cassette capable of accommodating a plurality of said substrates, said first

substrate transfer device being capable of transferring said substrate or said substrates between said cassette held by said cassette holding device and said plurality of modules.

21. **(previously presented)** A substrate processing apparatus as recited in claim 20, wherein said first substrate transfer device is provided with a structure capable of transferring said cassette.

22. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein said substrate transfer section is further provided with an elevator capable of vertically moving said first substrate transfer device.

23. **(previously presented)** A substrate processing apparatus as recited in claim 22, wherein said substrate transfer section is further provided with a cassette introducing section for transferring said cassette into said substrate transfer section and carrying out said cassette from said substrate transfer section, said cassette introducing section being disposed at a predetermined height which is different from the height of said cassette holding device.

24. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein said substrate processing apparatus is capable of processing a plurality of said substrates simultaneously, and said second substrate transfer device is capable of

transferring simultaneously the same number of substrates as said plurality of substrates to be simultaneously processed by said substrate processing apparatus.

25. **(currently amended)** A substrate processing apparatus as recited in claim 24,

wherein said substrate processing apparatus is a plasma enhanced processing apparatus for processing said substrates utilizing plasma, and includes a second substrate holding device capable of holding said plurality of substrates with the substrates being laterally arranged side by side, and

wherein said second substrate transfer device is capable of transferring simultaneously said plurality of substrates laterally arranged side by side.

26. **(presented previously)** A substrate processing apparatus as recited in claim 14, wherein said substrate processing apparatus is capable of processing a plurality of said substrates simultaneously, and said second substrate transfer device is capable of transferring said plurality of substrates one by one to respective their processing positions where said plurality of substrates are to be simultaneously processed.

27. **(previously presented)** A substrate processing apparatus as recited in claim 1, wherein the apparatus is configured to transfer and process a single substrate at a time.

28. **(previously presented)** A substrate processing apparatus as recited in claim

1, wherein the apparatus is configured to transfer a single substrate and to process a plurality of substrates at a time.

29. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein the apparatus is configured to transfer a plurality of substrates and to process a single substrate at a time.

30. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein the apparatus is configured to transfer and process a single substrate at a time.

31. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein the apparatus is configured to transfer a single substrate and to process a plurality of substrates at a time.

32. **(previously presented)** A substrate processing apparatus as recited in claim 14, wherein the apparatus is configured to transfer a plurality of substrates and to process a single substrate at a time.

33. **(currently amended)** A substrate processing apparatus as recited in claim 1, wherein the apparatus is configured to transfer a plurality of substrates at a time and to process a plurality of substrates at a time.

34. **(currently amended)** A substrate processing apparatus as recited in claim 14, wherein the apparatus is configured to transfer a plurality of substrates at a time and to process a plurality of substrates at a time.

35. **(previously presented)** A substrate processing apparatus as recited in claim 1, further including a plurality of cassette holders disposed in said substrate transfer section, each for holding a cassette.

36. **(currently amended)** A substrate processing apparatus as recited in claim 4 14, further including a plurality of cassette holders disposed in said substrate transfer section, each for holding a cassette.